Occupational Hazards in Eating and Drinking Places

Robbery, heavy lifting, wet floors, knives, and heat are a few of the many hazards faced by workers in the eating and drinking places industry. Robbery sometimes leads to homicides. Other hazards can cause nonfatal injuries such as sprains, strains, and tears; cuts, lacerations, and punctures; and heat burns and scalds.

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According to Bureau of Labor Statistics (BLS) data, approximately 304,000 nonfatal occupational injuries and illnesses and 146 occupational fatalities occurred in the eating and drinking places industry in 1999. The nonfatal injuries and illnesses ranged from minor to serious, and included sprains, strains, and tears from heavy lifting and from slipping on wet floors; cuts from knives; and burns from contact with hot fats and oils, water and steam, and heating and cooking machinery. The majority of the fatalities were homicides.

Eating and drinking places are defined as establishments where customers purchase prepared, ready-to-eat meals, buy and drink alcoholic beverages, or both. Meals are either eaten on the premises, taken out, or delivered. From hot dog vendors to 5-star restaurants, and from cocktail lounges to raucous nightclubs, there is a wide variety of eating and drinking places.[1] The staff of these establishments—mainly cooks and other kitchen workers; waiters and waitresses; bartenders; managers and supervisors; and delivery drivers—is exposed to a variety of hazards that can lead to debilitating injury, illness, or even death. This article identifies and examines those hazards using data drawn from two primary sources: The BLS Survey of Occupational Injuries and Illnesses (SOII) and the BLS Census of Fatal Occupational Injuries (CFOI).[2]

Findings from the SOII

The SOII collects national data on nonfatal occupational injuries and illnesses of wage and salary workers in private industry. Each year, a scientifically selected sample of private industry employers responds to a survey questionnaire.[3] Respondents report summary information on the numbers of injuries and illnesses directly from establishment safety logs. The information contained in these logs conforms to definitions and recordkeeping guidelines established by the Occupational Safety and Health Administration of the U.S. Department of Labor.

Nonfatal cases

Eating and drinking places is a large industry. In 1999, it employed approximately 6.5 million wage and salary earners—roughly 5 percent of the total employment for all private industry wage and salary workers that year.[4]

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TABLE 1. **Nonfatal occupational injuries and illnesses: industries with 100,000 or more total cases, 1999**

Industry[1]	Total cases (in thousands)
Eating and drinking places	304.2
Hospitals	293.6
Nursing and personal care facilities	192.2
Grocery stores	188.1
Motor vehicles and equipment	177.9
Department stores	162.3
Trucking and courier services, except air	142.1
Air transportation, scheduled	124.3
Hotels and motels	112.2
Private industry[2]	5,707.2

[1] Industries with 100,000 or more cases were determined by analysis of the number of cases at the three-digit SIC code level.
[2] Excludes farms with fewer than 11 employees.
SOURCE: Bureau of Labor Statistics, U.S. Department of Labor.

And in 1999, with about 340,000 worker injuries and illnesses, eating and drinking places accounted for approximately 5 percent of the United States' private industry injury and illness total—the highest percentage of any industry. (See table 1.) Eating and drinking places topped the survey's list of industries with the most nonfatal cases in each of the most recent 8 years for which data are available, 1992-99—except in 1996, when hospitals had the most cases.[5,6]

Comparatively, work in eating and drinking places was not exceptionally dangerous, despite one-third of a million cases reported in 1999. The industry's rate of injuries and illnesses for 1999, 5.6 cases per 100 full-time workers, was slightly below the rate for all private industry workers combined. (See table 2.) Additionally, most of the injuries and illnesses in eating and drinking places tended to be relatively minor—about one-third involved lost worktime, compared with almost one-half of injuries and illnesses for all private industry workers.[7]

The total injury and illness incidence rate for eating and drinking places declined over the 1992-99 period, in line with the nationwide trend. The incidence rate for all injuries and illnesses in eating and drinking places dropped from 9.1 in 1992, to 5.6 in 1999, while the total private industry rate fell from 8.9 to 6.3.

Case characteristics for 1998

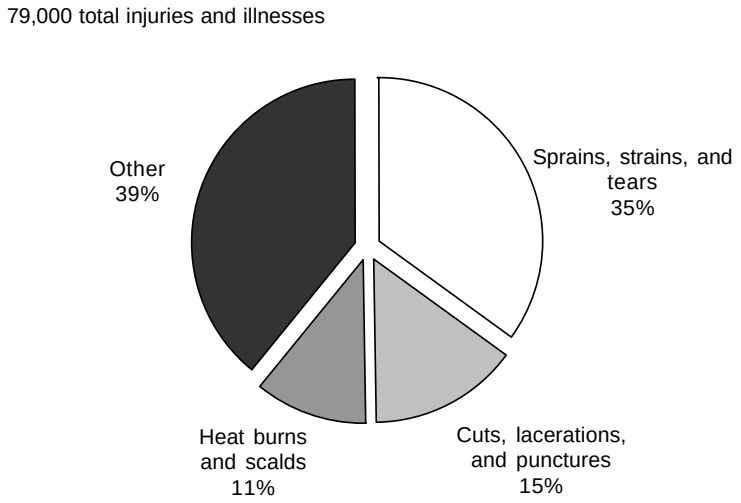
Although the work is not exceptionally dangerous, workers in the industry do face the risk of serious injury

TABLE 2. **Number of cases, in thousands, and incidence rates[1] of nonfatal occupational injuries and illnesses in eating and drinking places and private industry,[2,3] 1992-99**

Industry	Year							
	1992	1993	1994	1995	1996	1997	1998	1999
Eating and drinking places:								
Total cases:								
Number	396.7	391.5	362.7	379.2	315.1	328.6	334.7	304.2
Rate	9.1	8.5	7.7	7.6	6.2	6.5	6.3	5.6
Lost workday cases:								
Number	135.3	136.5	124.2	121.7	96.1	123.2	109.1	97.2
Rate	3.1	3.0	2.6	2.4	1.9	2.4	2.1	1.8
Cases with days away from work:								
Number	121.8	117.9	107.2	103.2	78.2	80.5	79.1	76.9
Rate	2.8	2.5	2.3	2.1	1.5	1.6	1.5	1.4
Total private industry:								
Total cases:								
Number	6,799.4	6,737.4	6,766.9	6,575.4	6,238.9	6,145.6	5,922.8	5,707.2
Rate	8.9	8.5	8.4	8.1	7.4	7.1	6.7	6.3
Lost workday cases:								
Number	2,953.4	2,967.4	3,061.0	2,972.1	2,832.5	2,866.2	2,780.7	2,742.8
Rate	3.9	3.8	3.8	3.6	3.4	3.3	3.1	3.0
Cases with days away from work:								
Number	2,331.1	2,252.5	2,236.6	2,040.9	1,880.6	1,833.4	1,730.5	1,702.5
Rate	3.0	2.9	2.8	2.5	2.2	2.1	2.0	1.9

[1] Incidence rates represent the number of injuries and illnesses per 100 full-time workers and were calculated as:
(N / EH) X 200,000 where:
N = number of injuries and illnesses,
EH = total hours worked by all employees during the calendar year,
200,000 = base for 100 full-time equivalent workers (working 40 hours per week, 50 weeks per year).
[2] Total private industry data exclude farms with fewer than 11 employees.
[3] Data conforming to Occupational Safety and Health Administration definitions for mining operators in coal, metal, and nonmetal mining and for employees in railroad transportation are provided to BLS by the Mine Safety and Health Administration, U.S. Department of Labor and the Federal Railroad Administration, U.S. Department of Transportation. Independent mining contractors are excluded from the coal, metal, and nonmetal mining industries.
SOURCE: Bureau of Labor Statistics, U.S. Department of Labor.

CHART 1. **Percent distribution of nonfatal occupational injuries and illnesses involving days away from work[1] in eating and drinking places by nature of injury, 1998**



[1] Days-away-from-work cases include those that result in days away from work with or without restricted work activity.

and illness. Approximately one-quarter of the total cases in 1998 were serious enough that workers took 1 or more workdays to recuperate (the median was 6 days).[8] The following sections discuss the characteristics of these more serious cases, the hazards that led to them, and the workers involved.

Type of injury

Sprains, strains, and tears. Just under 28,000 sprains, strains, and tears serious enough to warrant 1 or more workdays to recuperate—the median was 7 days—occurred in eating and drinking places in 1998. (See chart 1.) These injuries resulted primarily from falls to floors, walkways, and other surfaces; overexertion in lifting; slips, trips, and loss of balance without fall; and bending, climbing, crawling, reaching, and twisting. The injuries mostly affected the back, followed by the ankles and knees.

Cuts, lacerations, and punctures. Knives and other cutting and slicing tools are essential in eating and drinking places, and have been shown to be very dangerous. Whether peeling, dicing, mincing, or slicing, workers are always at risk of a cut injury. In 1998, there were approximately 12,200 serious cuts, lacerations, and punctures involving at least 1 day away from work to recuperate (the median was 4 days). Approximately 45 percent of these injuries were from nonpowered cutting handtools—mostly knives. About 15 percent were from specialized food and beverage processing machinery (such as food slicers, meat grinders, mixers, blenders, and whippers); and just under 10 percent were from dishes, drinking cups, and glasses, which were most likely broken, with sharp edges, although the survey does not provide such information. Almost 70 percent of all cuts, lacerations, and punctures were of the finger, fingernail, or both; and approximately 13 percent were of the hand, except the finger.

Heat burns and scalds. Whether one is grilling a steak, baking a soufflé, or keeping french fries warm, heat is essential in cooking. In 1998, there were just under 9,000 heat burns and scalds severe enough that injured workers took 1 or more days from work to recuperate (the median was 4 days). These injuries resulted from contact with hot objects and substances, including hot fats, oils, and other food products; liquids such as water and beverages; heating and cooking machinery such as stove tops, ovens, and grills; hot pots, pans, and trays; and steam. Just over one-third of the burns and scalds involved hands, fingers, or both.

Occupation

The major occupations in eating and drinking places are cooks, kitchen workers, and other food preparation occupations; waiters, waitresses, and their assistants; and managers, supervisors, and proprietors.[9] These occupations accounted for approximately three-quarters of the total hours worked in the industry in 1998.[10] (See table 3.) Other occupations included food counter, fountain, and related occupations; janitors and cleaners; drivers; cashiers; and bartenders.

This section examines the distribution of the major injuries and illnesses in eating and drinking places among the industry's major occupations. The SOII data are used in conjunction with data on annual hours worked from the Current Population Survey (CPS)[11] to roughly assess the variation in the risk of injury by occupation. A simplified example of the analysis follows.

Industry X has only two occupations—"A" and "B"— and each of these two occupations accounted for one-half of the industry's annual injury total. If workers in each occupation worked one-half of the total annual industry hours, it could be assumed that the risk of injury for workers in each occupation was about the same. However, if workers in occupation "A" worked only one-quarter of the total hours, and workers in occupation "B," the remaining three-quarters, we could assume that workers in occupation "A" had a risk of being injured on the job greater than that for workers in occupation "B." This is assumed because workers in occupation "A" are incurring the same number of injuries as workers in occupation "B," but are spending less time on the job.

This type of analysis revealed that,

TABLE 3. **Percent distribution of annual hours worked[1] and nature of nonfatal occupational injuries and illnesses involving days away from work,[2,3] by occupation, in eating and drinking places, 1998**

Occupation[4]	Annual hours worked	All injuries and illnesses	Sprains, strains, and tears	Cuts, lacerations, and punctures	Heat burns and scalds
All occupations	100	100	100	100	100
Cooks, kitchen workers, and other food preparation occupations	29	45	37	67	69
Waiters, waitresses, and their assistants	21	20	22	13	10
Managers, supervisors, and proprietors	27	9	11	4	6
All other occupations	23	26	30	16	15

[1] Hours worked figures are annual average estimates of total hours worked by private industry wage and salary earners, 16 years of age and older, from the Current Population Survey (CPS). The estimates include hours worked by employees for whom work in the industry is their primary job, as well as employees for whom work in the industry is their second job.

[2] To maintain consistency with the CPS estimates, injuries and illnesses incurred by workers under the age of 16 and workers for whom age was not specified were not included in the table.

[3] Days-away-from-work cases include those that result in days away from work with or without restricted work activity.

[4] The occupational group referred to in this table as ìCooks, kitchen workers, and other food preparation occupationsî includes the following detailed occupations: Cooks; kitchen workers, food preparation; and miscellaneous food preparation occupations. The group referred to as ìWaiters, waitresses, and their assistantsî includes waiters and waitresses, and waiters'/waitresses', assistants. And ìManagers, supervisors, and proprietorsî includes managers, food serving and lodging establishments; supervisors, food preparation and service occupations; and supervisors and proprietors, sales occupations.

SOURCE: Bureau of Labor Statistics, U.S. Department of Labor.

Table 4. **Percent distribution of annual hours[1] worked and nature of nonfatal injuries and illnesses involving days away from work,[2] by age group, 1998**

Age group	Annual hours	All injuries and illnesses	Sprains, strains, and tears	Cuts, lacerations, and punctures	Heat burns and scalds
Total	100	100	100	100	100
16-24 years	37	32	26	50	50
16-19 years	17	15	13	23	25
20-24 years	20	17	14	27	25
25-34 years	28	27	31	27	29
35-54 years	30	33	35	19	18
35-44 years	20	21	23	14	8
45-54 years	10	12	12	5	10
55-64 years	4	5	7	3	2
65 and older	1	1	1	ó	ó

[1] Hours worked figures are annual average estimates of total hours worked by private industry wage and salary earners, 16 years of age and older, from the Current Population Survey (CPS). The estimates include hours worked by employees for whom work in the industry is their primary job, as well as employees for whom work in the industry is their second job.

[2] Days-away-from-work cases include those that result in days away from work with or without restricted work activity.

NOTE: Percentages may not sum to totals due to rounding. Dash indicates percent less than 0.5.

SOURCE: Bureau of Labor Statistics, U.S. Department of Labor.

of the three major occupations, that of cooks, kitchen workers, and other food preparation workers was most at risk of occupational injuries and illnesses. It was followed by waiters, waitresses, and their assistants; and managers, supervisors, and proprietors.

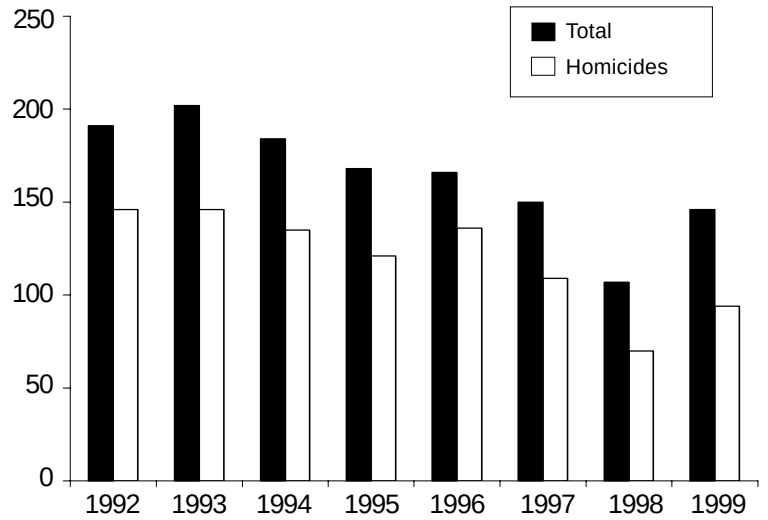
Cooks, kitchen workers, and other food preparation occupations. Among the occupations in the industry, cooks, kitchen workers, and other food preparation occupations incurred nearly one-half of the 1998 industry total of injuries and illnesses—while working just under 30 percent of the industry's total hours. They accounted for more than two-thirds of the cuts, lacerations, and punctures, and heat burns and scalds, and a third of sprains, strains, and tears.

Waiters, waitresses, and their assistants. Waiters, waitresses, and their assistants had the second highest frequency of injuries and illnesses—one-fifth of the total. They accounted for 22 percent of the sprains, strains, and tears; 13 percent of the cuts, lacerations, and punctures; and 10 percent of the heat burns and scalds. Their proportion of the industry's injuries and illnesses was roughly the same as their proportion of hours worked.

Managers and supervisors. Managers and supervisors incurred just under one-tenth of the industry's injuries and illnesses in 1998, far below their 27-percent proportion of the total hours worked. They accounted for 11 percent of the sprains, strains, and tears; 4 percent of the cuts, lacerations, and punctures; and 6 percent of the heat burns and scalds.

These findings are not unexpected. Cooks, kitchen workers, and other food preparation occupations do the heaviest lifting—large sacks of flour, heavy bags of potatoes, carrots, and so on. Workers in these occupations also do most of the cutting, and are the most exposed to heat. Waiters, waitresses, and their assistants are involved in a large share of lifting as well—trays of

CHART 2. **Total number of fatalities and number of homicides in eating and drinking places, 1992-99**



food, tables and chairs, and bins of dirty dishes—but severe strain tends to be less frequent. Waiters, waitresses, and their assistants also are exposed to cut injuries (for example, while cutting lemons for iced tea, or from broken dishes and glasses) and to burns (for example, from spilled hot coffee or food), but again, the frequency of these injuries is much less than for kitchen occupations. And lastly, managers, supervisors, and proprietors face the least risk of injury and illness. They are mostly involved in administrative tasks— hiring, scheduling, placing orders, advertising, and the like.

Age of worker

Further analysis indicates that younger workers are more likely to receive cuts, lacerations, and punctures and heat burns and scalds than are older workers. But older workers are more likely to incur sprains, strains, and tears.

Workers 16 to 24 years of age. Eating and drinking place workers aged 16 to 24 years accounted for a little more than one-third of the total hours worked in the industry in 1998 (37 percent), and experienced just under one-third of the total injuries and illnesses. (See table 4.) These workers' proportion of sprains, strains, and tears—26 percent—was lower than their proportion of hours worked, but their proportions of both cuts, punctures, and lacerations and of heat burns and scalds—each one-half—were much greater.

Workers 25 to 34 years of age. Eating and drinking place workers aged 25 to 34 years worked less than one-third of the total hours worked in the industry (28 percent), and experienced about the same proportion of the total injuries and illnesses. These workers' proportions of the total sprains, strains, and tears; cuts, lacerations, and punctures; and heat burns and scalds were all just below one-third.

Workers 35 to 54 years of age. Eating and drinking place workers aged 35 to 54 years accounted for a little less than one-third of the hours worked in the industry (30 percent), and experienced one-third of the injuries and illnesses. Their proportion of sprains, strains, and tears—35 percent—was greater than their proportion of the hours worked, and their proportions both of cuts, lacerations, and punctures and of heat burns and scalds—each about one-fifth—were lower.

The survey does not tell us why younger workers in the industry are more likely to experience cuts, lacerations, and punctures and heat burns and scalds than are older workers, nor why older workers are more likely than younger ones to experience sprains, strains, and tears. What the data may be showing is that the risk for cuts and burns is a function of skill. Handling cutting tools and handling heat requires skill—and skill takes time to develop. While knives and heat harm bodies of any age equally, heavy lifting and falls may not. With respect to sprains, strains, and tears, the data may reflect the fact that older workers' bodies tend to be less resilient to the strains of heavy lifting and injuries resulting from falls to the floor.[12]

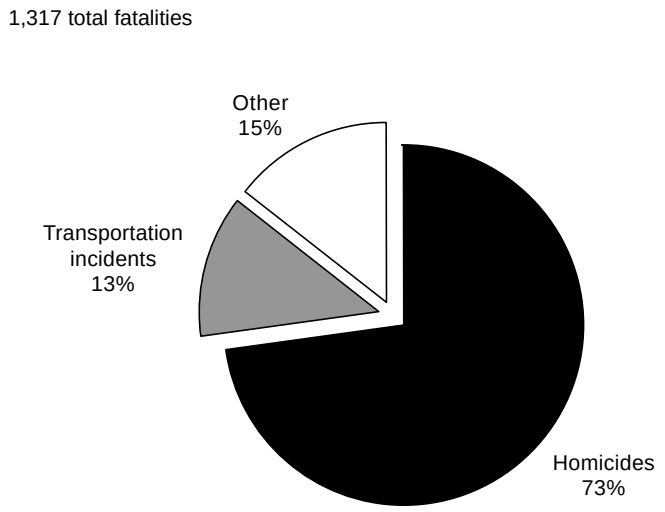
Findings from the CFOI

The CFOI covers all fatal work injuries incurred by wage and salary earners in private industry and government and the self-employed. This program has collected occupational fatality data nationwide since 1992. The CFOI program uses diverse data sources to identify, verify, and profile fatal work injuries. Detailed information about each workplace fatality (industry and other work characteristics, equipment involved, and circumstances of the event) is obtained by cross-referencing source documents such as death certificates; workers' compensation records; coroner, medical examiner, and autopsy reports; Occupational Safety and Health Administration fatality reports; news stories; followup questionnaires; State motor-vehicle accident reports; and other sources. This variety of sources ensures that counts are as complete and accurate as possible.

Fatal injuries

As chart 2 shows, worker fatalities in the eating and drinking places industry in 1999 were up 35 percent from the previous year—the first increase in the industry since 1993, when figures were at an 8-year high (202 fatalities). Despite this recent increase, both the number and rate of worker fatalities in the industry declined over the 1992-99 period. In 1999, 146 workers in the industry (2.1 per 100,000 employed) were fatally injured, down from 191 workers (3.3 per 100,000 employed) in 1992.[13] (See table 5.)

CHART 3. **Percent distribution of fatal occupational injuries in eating and drinking places by event, 1992-99**



Workers in the eating and drinking places industry were fatally injured at a rate of 2.1 fatalities per 100,000 employed, just under one-half the rate for all workers in the entire U.S. economy combined (4.5 fatalities per 100,000 employed). However, their rate of homicide fatalities was almost 3 times greater. Just under 1.5 workers per 100,000 employed in this industry were the victims of homicide, compared with 0.5 for all workers.

Case characteristics

There were 1,317 employees killed at work in the eating and drinking places industry over the 8-year period 1992-99. Homicides were the leading cause of death, accounting for almost three-quarters of the total fatalities. (See chart 2 and chart 3.)

Homicides

There were 957 homicides in the eating and drinking places industry over the 1992-99 period.[14] The major perpetrators of the homicides were robbers; customers and clients; coworkers and former coworkers; and relatives and other personal acquaintances. Most of the victims, 80 percent, were shot and killed; slightly more than a tenth were stabbed to death; and just under 5 percent died from severe hitting, kicking, and beating.

Robbers. As with other industries dealing in cash transactions with the public, the majority of workers in the eating and drinking places industry are at risk of being involved in a robbery. Forty percent of the 957 homicides in the industry over the 1992-99 period are known to be robbery related. Many of these homicides occurred at restaurants or bars. Delivery drivers also were robbed and killed while on their way to and from deliveries, and at the place of delivery itself; and employees delivering the day's receipts to the bank were robbed and killed on the way or at the night deposit drawer.[15]

Customers and clients. Just under a tenth (78) of the homicides in the eating and drinking places industry over the 8-year period were committed by customers and clients. These homicides occurred under a variety of circumstances, and mostly at nightclubs. Many took place after customers—or would-be customers—were denied alcohol, denied admittance to nightclubs, or removed from nightclubs because they were disorderly. These circumstances led to arguments between employees and the customers, and ultimately to worker fatalities. In many of these cases, the angered customers actually left the establishment and returned some time later to kill the employees. Customers also killed workers after the workers attempted to break up conflicts between them and other patrons.

Other. Other homicides in the eating and drinking places industry were perpetrated by coworkers or former coworkers and by relatives and other personal acquaintances. Coworkers and former coworkers were the perpetrators of approximately 6 percent (60) of the industry's homicides over the 8-year period, and relatives and other personal acquaintances accounted for 5 percent (48).

Managers, supervisors, and proprietors were the most frequent homicide victims—44 percent of the deaths over the 8-year period.[16] Cooks were involved in approximately 8 percent of the homicides; private guards and police (frequently nightclub bouncers), and bartenders were each involved in approximately 7 percent; and delivery drivers, approximately 6 percent.

Transportation incidents

After homicides, transportation incidents were the second leading cause of fatalities in the eating and drinking places industry over the 8-year period (13 percent of the fatalities). The majority were highway incidents (128 fatalities). In addition, 20 workers were fatally injured as pedestrians struck by another vehicle, and 6 were fatally injured when a train struck their vehicle. Approximately 40 percent of the workers killed in transportation incidents were delivery drivers, and a little under one-third were managers, supervisors, and proprietors.

THE NUMBERS AND INCIDENCE RATES of both nonfatal injuries and illnesses and of fatal injuries decreased in the eating and drinking places industry over the 8-year period 1992-99. This highlighting of some of the hazards of the industry may help decrease these figures further and increase worker safety.

Table 5. **Incidence rates[1] for fatal workplace injuries and homicides, all U.S. industries combined and the eating and drinking places industry, 1992-99**

Industry	1992	1993	1994	1995	1996	1997	1998	1999
Total, all industries:								
All fatal injuries	5.2	5.2	5.3	4.9	4.8	4.8	4.5	4.5
Homicides	.9	.9	.9	.8	.7	.7	.5	.5
Eating and drinking places:								
All fatal injuries	3.3	3.3	2.9	2.7	2.6	2.3	1.7	2.1
Homicides	2.5	2.4	2.1	1.9	2.1	1.7	1.1	1.4

[1]The incidence rate represents the number of fatal occupational injuries per 100,000 employed workers and was calculated as: (N/W) x 100,000, where:

N = number of fatal work injuries
W = number of employed workers

Employment figures are annual average estimates of private industry wage and salary earners and self-employed civilians, 16 years of age and older, from the Current Population Survey (CPS). Fatally injured workers under the age of 16 were not included in the rate calculations to maintain consistency with CPS estimates.

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[1] Throughout this article, the eating and drinking places industry is often referred to as simply eating and drinking places. Not all injuries, illnesses, and fatalities in the industry occurred at the places where food and beverages are consumed—for example, some of the injuries and fatalities occurred on highways as the result of traffic incidents. The eating and drinking places industry is classified in the Standard Industrial Classification Manual, 1987 edition, as major group 58. See the manual for the complete definition.

[2] This article updates research by Bureau of Labor Statistics economist Martin E. Personick. See Martin E. Personick, "Profiles in safety and health: eating and drinking places," *Monthly Labor Review*, June 1991, pp.19-25.

[3] Occupational injury and illness data for coal, metal, and nonmetal mining and for railroad activities are provided by the Department of Labor's Mine Safety and Health Administration and the Department of Transportation's Federal Railroad Administration. The survey excludes all work-related fatalities as well as nonfatal work injuries and illnesses to the self-employed, to workers on farms with 10 or fewer employees, and to private household workers. For national estimates, the survey excludes Federal, State, and local government workers.

[4] The employment figure is an annual average estimate of private industry wage and salary earners, 16 years of age and older, from the Current Population Survey (CPS).

[5] At the suggestion of the National Academy of Sciences and other expert safety groups, a redesigned SOII was implemented in 1992. (See National Research Council, *Counting Injuries and Illnesses in the Workplace: Proposals for a Better System* (Washington, National Academy Press, 1987.) From 1992 forward, the survey began collecting data on the "who and how" of serious work injuries, that is, those resulting in days away from work. Prior to 1992, the survey had provided information on the number and incidence rate of injuries and illnesses by industry, but shed little light on the workers most at risk or the risks themselves. In addition, prior to 1992, the survey estimated annual fatalities by industry. From 1992 forward, the newly formed Census of Fatal Occupational Injuries (CFOI) has counted fatalities and the SOII has covered only nonfatal injuries and illnesses.

[6] Industries with the highest levels of injury and illness cases were evaluated at the three-digit Standard Industrial Classification level of detail.

[7] Lost worktime cases involve days away from work, or days of restricted work activity, or both.

[8] At the time this study was conducted, 1998 data were the most recent available on injury and illness case characteristics.

[9] The occupational group referred to as "managers, supervisors, and proprietors" includes managers, food serving and lodging establishments; supervisors, food preparation and service occupations; and supervisors and proprietors, sales occupations.

[10] The hours worked figures are annual average estimates of total hours worked by private industry wage and salary earners 16 years of age and older from the CPS. To maintain consistency with the CPS, injuries and illnesses incurred by workers under the age of 16 and cases for which the age of the worker was unspecified were not included in any comparisons with the hours data.

[11] The CPS is a monthly, nationally representative random sample survey of about 60,000 households that obtains a variety of information about individuals—in particular, the actual number of hours worked of each individual in the week prior to the survey. Information on the gender, age, occupation, industry, and class of worker also is collected for each employed person.

[12] For an analysis of youth injuries in fast food restaurants, see Kitty J. Hendricks and Larry A. Layne, "Adolescent Occupational Injuries in Fast Food Restaurants: An Examination of The Problem From a National Perspective," *Journal of Emergency Medicine*, December 1999, pp. 1146-53.

[13] The fatality incidence rate represents the number of fatal occupational injuries per 100,000 employed workers and was calculated as: (N/W) x 100,000, where:

N = number of fatal work injuries and
W = number of employed workers.

Employment figures are annual average estimates of private industry wage and salary earners and self-employed civilians 16 years of age and older from the CPS. Fatally injured workers under the age of 16 were not included in the rate calculations to maintain consistency with CPS estimates.

[14] For further information, see Eric F. Sygnatur and Guy A. Toscano, "Work-related Homicides: The Facts," *Compensation and Working Conditions*, spring 2000, pp. 3-8.

[15] The occupational group referred to as "delivery drivers" includes the detailed occupations of truckdrivers and drivers—sales workers.

[16] See footnote 9.